



Usability of Workplaces

Case Study of DR Byen in Copenhagen

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**USABILITY OF
WORKPLACES:
CASE STUDY OF
DR BYEN IN COPENHAGEN**

Research Report

May 2008

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Abstract:

Purpose: The report presents an evaluation of a new broadcasting facility with focus on the usability of the new workplaces and working environments and the satisfaction both with the user involvement and the finished buildings.

Methodology/approach: The evaluation is mostly based on post occupancy evaluation including an interview survey among managers and staff in DR. The results of the survey are analyzed in relation to the intentions for the new facility and the concept of usability.

Findings: The research indicates that the involvement of the users in briefing and design has a clear positive effect on the finished buildings and the user satisfaction. Besides measuring satisfaction, the study also indicates a number of ways that the facility supports and improves the efficiency and effectiveness of the working environment and the organisation.

Research limitations: The survey covers 18 respondents at an early stage after occupation and the results are qualitative. The intention is to follow up with further evaluations of both quantitative and qualitative nature.

Practical implications: The study can help the user organisation to improve the facility and other organisations to learn from this case.

Originality/value: The report provides a case study with presentation and evaluation of a new architecturally and technologically advanced media centre and contributes to the understanding and methodology to investigate the usability of workplaces.

Keywords: Usability, workplaces, user involvement, post occupancy evaluation, broadcasting facilities, satisfaction.

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1. INTRODUCTION

This report presents an evaluation of the usability of a new media centre (DR Byen) for Danish Broadcasting Corporation (DR) in Copenhagen, Denmark. The report is based on the author's experience as deputy project manager in the client organisation for the building project during briefing and design as well as research as a university researcher, which includes a post occupancy evaluation based on an interview survey among DR's staff after their move to the finished building complex.

The evaluation concerns the buildings as work environment, the involvement of users in the planning process as well as the fulfilment of the vision for the new media centre. The investigation aims at gathering the experiences from the building project, and the research has been carried out in collaboration between Technical University of Denmark (DTU) and DR's client organization.

The evaluation is also part of the international research project "Usability of Workplaces" carried out in collaboration between CIB W111 and EuroFM's Research Network Group. As part of this project a workshop took place at DR Byen in April 2007 to present and discuss preliminary results from the evaluation with representatives from the client organisation, the Danish research team and the international research group.

The interview survey was carried out by a team from the DTU consisting of associate professor Per Anker Jensen, research assistant Janus Day Larsen and Dutch guest student Maarten Zwemmer, which did a study project on user involvement with DR Byen as a case. Project director Kaj Toft from DR's client organisation for DR Byen was the contact person to DR.

2. DR AND DR BYEN

DR is a national public service broadcaster of television and radio financed by license fees. Until the relocation DR had 12 different addresses and two main centres in Copenhagen – Radio House from around World War II and placed close to the city centre of Copenhagen and the Television Centre from the 1960's and 1970's placed 10 km north of Copenhagen. With the new development DR has relocated all functions in the Copenhagen area to the new media centre called DR Byen (DR Town) and placed in a new part of Copenhagen on former military land close to the city centre and serviced by a new Metro line.

During the planning process DR formulated a vision for DR Byen shown in Figure 2.1.

<p>DR Byen – a world class multimedia house</p> <p>What does it mean to the <i>Danes</i>?</p> <ul style="list-style-type: none">• Better programmes• More choice <p>What does it mean to the <i>users</i>?</p> <ul style="list-style-type: none">• A flexible and open work environment• An inspirational base for collaboration and creativity
--

Figure 2.1. DR's vision for DR Byen (DR, 2003)

The main reason for the relocation was the revolutionary changes in the electronic media from analogue to digital technology. This change involves a convergence of information and communication technologies and has been the basis for the introduction of new ways of producing radio and television. Today, editing of video and sound is done on computer based technology like text editing and the possibility of content sharing has increased tremendously. This means that journalists and other program staff can do many tasks in the production of electronic media, which earlier were specialist tasks carried out by technical staff – very similar to the changes in the division of labour between journalists and typists in the printed media during the 1970's. In DR, these changes were followed up by the formation of a new multi-media organisation, where the earlier strong division between departments producing radio in Radio House and departments producing television in the Television Centre has been replaced by departments, which both produce radio and television as well as diverse on-line products. Besides these technological based reasons, an overall purpose with the relocation was to change DR's image and corporate culture from the monopoly era to become a modern, open and dynamic organisation.

The new media centre is a huge building complex with 130.000 m² including full basement. The decision to start the project was taken in 1999. Based on a master competition in 2000 the complex was divided in four rectangular buildings designed by

different design teams. The four buildings are placed in one big rectangle which is separate by an artificial canal in north-south direction and joined together with a connecting “Internal street” in east-west direction, which cross the canal on the second floor as a four storey high glass covered bridge building, see Figure 2.2.

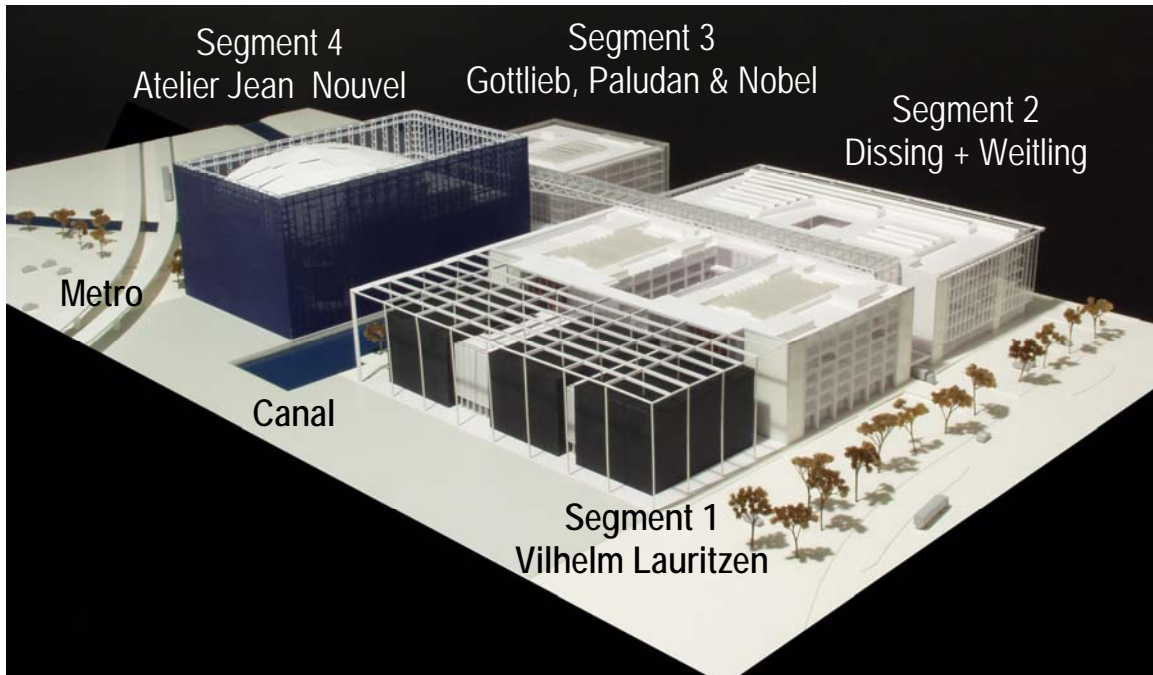


Figure 2.2. Model photo of the final design – seen from south-east

The complex is in general 6 storey's tall except for one part (segment 4) that includes the concert hall and has a total height of 45 m above ground level. The building with the concert hall is designed by the French architects Atelier Jean Nouvel. The Danish architects Vilhelm Lauritzen AS won the master plan competition and has designed the largest building (segment 1) and the Internal Street. The other buildings are designed by Danish architects Dissing + Weitling AS (segment 2) and Gottlieb, Paludan & Nobel. (segment 3).

Segment 1, 2 and 3 were occupied gradually during 2006. Only these parts of the complex are covered by this evaluation. Segment 4 has been severely delayed and the office part was occupied in June 2007, while the concert hall will be open to the public early 2009.

One of the objectives of the evaluation is to clarify to what extent the intentions, requirements and expectations to the use value of the buildings have been fulfilled. Another objective is to identify what could have been done to increase the use value, and what possible adjustments can be made to improve the buildings. In a wider sense the purpose is to contribute to the development of methods to evaluate the use value of

buildings and to utilize the experiences from DR Byen in improving future building projects.

The evaluation concerns the generally usable spaces in DR Byen with main focus on the workplaces in open environments and the common areas like cafés, atria, the Internal Street, staff restaurant, meeting areas and service facilities. Special rooms like studios and editing suites are not evaluated as such, but the relationships between the open environments and the special rooms is part of the evaluation.

The evaluation puts particular emphasis on the fulfilment of the requirements and intentions in relation to achieving buildings with attractive and creative working environments, a pleasant indoor climate, possibilities to easily adapt the layout to changing organizational needs and with good opportunities for informal contacts across physical and organizational divides. Attempts will be made to clarify what impact the new physical surroundings have on the way DR's organization functions and performs and the possibilities to develop. The satisfaction among staff with the buildings is also investigated.

The results presented here are based on a first and early qualitative evaluation in spring 2007 when only 3 out of 4 segments in the whole complex of DR Byen had been taken into use. The 3 segments were occupied gradually during 2006. The intention is to follow up with further evaluations of both quantitative and qualitative nature. The evaluation is also documented in full in a research report in Danish (Jensen, 2007a).

Further description and analyses of the planning of DR Byen, including briefing, design of workspaces and the user involvement, can be found in a research report in English (Jensen, 2007b).

3. METHODOLOGY

The interview survey included a total of 18 interviewed people employed by DR. The interviewees were evenly distributed among managers, who all had been involved in the planning of DR Byen, and ordinary members of staff – out of which some had been involved in user groups during the planning of DR Byen and others had not been involved. The interviewees were also distributed among the three segments with most in the very large segment 1 and least in the smallest segment 3. The distribution of the interviewees is shown in table 3.1.

Table 3.1 The interviewees distributed among managers and staff and among segments

	Segment 1	Segment 2	Segment 3
Managers			
• Involved	5	2	2
Staff			
• Involved	3	2	1
• Not involved	1	1	1

The interviews were carried out as semi-structured qualitative interviews using an interview guideline with about 60 questions divided in four themes:

- Evaluation of the new surroundings
- User involvement
- The overall process
- The Vision for DR Byen

Questions were as far as possible formulated openly. As a main principle all interviewees were asked the same questions, but questions about the overall process were mostly asked to those who had been involved. In some cases additional questions were asked dependent on the interviewee. Each interview lasted about 1 hour. The interviews were recorded and written minutes were sent to the interviewees for comments and acceptance.

Before the survey, the managers among the interviewees were contacted by mail by DR's client organization with information about the investigation. Afterwards they were contacted by BYG-DTU, and arrangements for the interviews were made. The managers were asked to appoint the members of staff to be interviewed. None of the people contacted refused to participate in the survey.

The 18 interviews took place from 19. March to 16. May 2007, and at the time of the survey people had worked between 4 and 12 month in DR Byen. There was still a huge building site around the occupied buildings, and the Internal Street was not finished, but had just been opened between segment 1 and 2 without any service facilities in operation.

In the occupied segments there was still trouble shooting going on both in relation to the building and the technology. Major changes in DR's organization also took place during the period.

However, most importantly, DR went through an economical crisis at the time with severe cuts being announced shortly before the survey, and as a consequence about 10% of the staff was going to be made redundant. The cuts were partly due to budget overruns on the building project – mostly related to the concert hall in segment 4. At some points during the period of the survey strikes occurred among DR's staff as protests against the redundancies.

This situation in the survey period could influence the results negatively. The economical situation has clearly had an impact on the replies to some of the questions, and particularly on those related to the vision for DR Byen concerning the possible effect on DR's broadcasting output. Besides these questions it is the impression that the interviewees in general have been capable of separating DR's economical conditions from their evaluation of the physical environment in DR Byen and the previous planning process.

4. RESULTS

The results of the interview survey are presented anonymously. The presentation follows the division in the four themes in the interview questions. The ordinary text presents the general results from all the interviews, and this is supplemented by boxes with citations from some of the interviews. The citations do not necessarily represent the general picture, but have been chosen as remarkable and interesting expressions. They can be typical viewpoints, which deepen or vary the general picture, or they can be more extreme viewpoints showing the width in the replies.

It is indicated in the boxes whether the citations are from a manager or an ordinary member of staff. The reason is not that the division of views in general follows a line between managers and staff. It is only to provide a better background for reading the statements.

4.1 Evaluation of the new surroundings

The overall impression of DR Byen is generally positive. The diversity due to the involvement of four different architects and the transparency and the light in the buildings are emphasized as positive aspects. It is appreciated that everything is new and also that DR has become more united than before. The architecture is also mostly evaluated positive. The newsroom atrium with the open and curved balconies in the western part of segment 2 is regarded as exceptional, but also other atria and high rooms are valued. Segment 3 is evaluated as very well functioning, and segment 2 is also evaluated positive, while segment 1 is seen as the least successful – although mainly by people working in other segments. The expectations for the Internal Street and the concert hall are great.

Managers:

"The layout of the building is perfect for the overall purpose"

"The western part of segment 2 is an architectural scoop"

Staff:

"The division and layout of the building is fine. It seems like it has been thought through, how things should be placed in relation to each other"

"It is attractive, but there is too much glass"

The workplaces and furniture, in general, function very well but the working environment is anonymous and impersonal, and some find that there is too little space. The views are very much divided in relation to the open environment. The managers are generally positive, even though they get disturbed more than before, but they are also more accessible to the staff. One of the staff representatives does not thrive at all in the open environment and prefers to work at home as much as possible. The views are also divided

whether there has been an increase in knowledge sharing or not, but it is seen as an advantage that people sit closer to each other, and it is easier to see who are present. Another advantage is that more groups and departments have been placed more together than earlier. In spite of problems with trouble shooting for instance in relation to ventilation, light control and sun shades, the indoor climate is mostly evaluated positively. Some mention that the acoustics in the open environment works surprisingly well.

Managers:

"The open offices give the manager some possibilities to influence the staff and give a feeling of the general spirit"

"Workplaces and furniture functions without any problems, but people make too much mess. Too much old paper culture has moved in"

Staff:

"A library atmosphere has evolved, because everybody is afraid to make noise"

"Workplaces functions well, but the furniture is ugly. It is sterile and looks more like a bank or an insurance company – not a media company"

Most find that there is more contact across the organization in DR Byen than before. Cafés and informal meeting places are used very differently. In segment 1 and 2 the cafés on the second floor are used as meeting places, while the cafés on the other floors are used only as kitchens. Those of the common areas that have been taken into use are generally evaluated positive. The atria are used in varying degrees. The staff restaurant is regarded as boring and has problems with logistics and capacity. The meeting centre in segment 3 functions well, but the architectural quality of the great meeting hall does not live up to some managers' expectations.

Managers:

"The distances are much shorter - both mentally and physically – compared to TV-byen"

"The understanding of how to use the common facilities is not developed yet"

Staff:

"It is more common to stop and talk together, because you see each other all the time. That gives some social benefits"

It is in general difficult to evaluate the impact of the new surroundings at the moment. It has become easier to change the layout of workplaces. There are some indications, that efficiency has increased, and there is a great potential for increase in productivity, but problems with technology has limited the benefits for those involved in production of radio and TV. The relocation has created a stronger coherence in the organization, and a more united culture has evolved.

Managers:

"The building provides a more appropriate frame for the value DR wants to create, and you can already feel that"

"The buildings provide the opportunities for efficiency and stronger focus"

Staff:

"Projects have more spin-off, because we sit closer together"

"People show more social behavior and use each other more"

The things that people miss in DR Byen are mostly of intangible character like ambience and atmosphere. From Radiohuset the architecture and the roof garden are missed, and from TV-byen the surrounding facilities are missed. The smoking policy with a total ban on smoking indoor is evaluated as positive and is accepted and followed, but the conditions in the outdoor smoking area are not satisfactory.

4.2 User involvement

The group based approach has worked well and was in accordance with the culture in DR. The sizes of the groups – maximum 10 in construction briefing and 8 in interior planning - were appropriate. Information exchange with the interior architects has been satisfactory and improved through the process, and the staff was well informed. The inputs from the users were implemented in various degrees. The process was mostly characterized by consensus with few conflicts, and differences in views have been handled well. The managers find that they had strong influence, but several members of staff find that the managers were equal partners in the involvement process.

Managers:

"As far as the economy allowed it the users' inputs have had influence"

"In the interior planning of workplaces people feel a bit cheated. The rooms restrict to a certain degree how many there can be and the policy on furniture was very restrictive"

Staff:

"The group based process started fine. We were promised a lot. The closer we came to the move, the more limited the decisions became"

"The Involvement has contributed considerable to the final result and it has been well received by colleagues"

The amount of staff resources used in the process has in general been on a reasonable level in relation to the outcome of the process. However, some managers feel that too many resources were used in the involvement process, while some members of staff find that the users' possibilities to influence the result were too limited.

Manager:

"The user processes could have been managed more strictly and thereby many resources could have been saved, but it was really good to make the involvement. The same result could have been achieved by a more efficient process."

Staff:

"We used a lot of energy to decide how to place 75 desks"

The most important outcome is that the staff has been mentally prepared to move and feels ownership to the final result. Contrarily, a process without user involvement is regarded to have created dissatisfaction, more complaints and greater resistance to changes. Most find that the user involvement has led to buildings that suit the needs of the users better. The user involvement led to a higher degree of motivation among staff during the process, but after the relocation one does not notice any difference in motivation between those who were involved in the process and those not involved.

Managers:

"The closer one has been to the process, the more enthusiasm and motivation there has been"

"You do not notice any difference in motivation between people that were involved and those that were not. However, during the process this difference was obvious"

Staff:

"There has been a difference in motivation among those that were not involved as they did not have the same level of information. But it was good that they knew that their colleagues were represented in the involvement process"

"Those that were not involved do not care so much about the facilities"

In general, there is satisfaction with DR Byen, even though there are differences in the level of satisfaction. Among the interviewees most managers find that there is great satisfaction while some of the members of staff are more uncertain.

Managers:

"There is great satisfaction with the building, and you do not notice any difference in satisfaction among those who were involved in the planning, and those who were not"

"The group of people that had individual offices before the move is not satisfied"

Staff:

"The degree of satisfaction depends on who you talk with. Many complain, but generally people are positive"

"Even though there still are some problems with the buildings, I find that there mostly is a general satisfaction with DR Byen"

4.3 The overall process

In general there has been a good coherence between the main processes in the planning of DR Byen, although there were some problems with the timing, particularly for the technology. The client organization has been sensitive to the needs of DR's organization, but there have in varying degree been problems in the communication between the different architects and the users. The management of the planning process should have been stricter.

Managers:

"It has been underestimated how long time change processes take"

"People have experienced, that rooms were placed differently from where they wanted them"

Staff:

"There has been good coherence in the processes. The staff was prepared by courses and the interior layout was changed to open plan offices in TV-byen, which also meant that one had to tidy up one's stuff."

"The architecture has been more important than functionality"

4.4 The vision for DR Byen

Before the interior planning process started DR formulated a vision for DR Byen, which is shown in chapter 3.3.

The views are divided whether a world class multimedia house has been or will be created. Many believe and hope that DR Byen will become a world class multimedia house.

Managers:

"It is possible to produce better programmes for the same money"

"Diversity can create innovation and thereby better programmes. This is easier in DR Byen, which support the movement in digital technology"

"It will not mean better programmes, but a better environment has been created. Many other elements are part of the foundation for good programmes; it is not only the buildings"

Staff:

"The environment in DR Byen will create the elements that are needed to produce better programmes to the Danes"

"DR Byen does not in itself lead to better programmes, but we will be able to deliver more for the same money"

"At the moment we produce worse programmes due to the cuts – that is not caused by the buildings or the environment. Over time we will be able to create better programmes, because it is a media house where we have the opportunities to work together in all sorts of combinations"

A flexible and open work environment has been created for the users, but the flexibility has not yet been utilized very much. Most of the interviewees also find, that DR Byen provides an inspirational base for collaboration and creativity, or that this will be achieved when the Internal Street is completely finished.

The views are very divided – both among managers and staff – about DR Byen's impact in relation to DR's broadcasting output to the Danish people, and the economical situation influences the evaluation considerably. Several find that DR Byen over time will lead to better programmes, and some also think that DR Byen will give more choice.

5. DISCUSSION

The concept of usability is defined in ISO 9241-11 as: “The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use” (ISO 1998). In relation to usability of workplaces a Norwegian project has developed a framework for usability criteria, where efficiency is sub-divided in efficiency related to organisation and efficiency related to building, effectiveness concerns added value understood as increased potential for cooperation, learning, innovation, adaptability etc., and satisfaction is sub-divided in satisfaction for employees and satisfaction for customers (Hansen & Knudsen, 2006).

This evaluation has not concerned efficiency related to building and satisfaction in relation to customers. The focus has mostly been on satisfaction for employees (including managers), but there have also been attempts to uncover the efficiency related to the organisation and the effectiveness in terms of added value. The following is an attempt to characterize the usability of DR Byen by summarizing the evaluation in relation to these 3 criteria and the effects of the user involvement.

5.1 Efficiency

Relocation of the organisation from 12 addresses into one facility have clear organisational benefits with directorates and departments being placed together without having to spend transport time to meet and with general easier internal communication. Besides that, the increase in efficiency is mostly related to the open workspaces, which means that it is easier to move around and adapt the configuration of the work environment to the changing needs of the organisation. The potential for increased productivity is high due to a more functional layout, for instance short distances between workstations and studios, but problems with technology were impediments at the time of the evaluation.

5.2 Effectiveness

It is difficult at this early stage to evaluate the buildings’ possible impact on the effectiveness in terms of added value for the organisation, but there are some indications of actual and potential impacts. It takes time to learn to know and fully use and utilize the new environment. However, it is an advantage for the internal collaboration that people are placed close together and can see who are present. There is also more contact across department and the common areas are used for informal information and inspiration, but still not to their full potential. Several respondents expect that DR Byen over time will lead to better programmes. There are signs of a change towards a stronger coherence in the organisation and a more united corporate culture.

5.3 Satisfaction

The satisfaction with the new working environment is generally high. Managers are mostly very satisfied while the degree of satisfaction is more varied among other members of staff. The disagreement mostly concerns the open workspaces, which some of the staff are opposed to. The furniture works well, but the working environment is impersonal. Several respondents find that it is a pleasure to move into a place with architectural diversity and where everything is new, but some find that the new buildings lack atmosphere and spirit. The transparency of the buildings dominated by glass walls is mostly regarded as positive, but it has created some problems with privacy.

5.4 User involvement

The satisfaction with the user involvement is also generally high – both among managers and staff – even though some managers feel that too much time was spent on the involvement and some members of staff would have liked more influence. The user involvement has resulted in buildings that better suit the needs of the user. The staff has been mentally prepared to move in and to the general change process that has been part of the relocation. The effect has also been an increased motivation for the work in DR for many of those who have been involved directly in the planning process, but this effect has only lasted for a limited period.

6. CONCLUSION AND RECOMMENDATIONS

In spite of the economical crisis in DR during the survey period with announcement of cuts and redundancies and the trouble shooting going on in relation to both buildings and technology, the interview survey shows an overall positive evaluation of DR Byen after occupation by the 9 managers and 9 staff representatives involved in the investigation. The managers are - not surprisingly – the most positive, while the views from staff are more mixed. However, most of the staff representatives are positive and only a few are very critical.

6.1 Recommendation for DR's organization

DR Byen was defined to be the physical environment for a new way to produce electronic media with focus on creativity and cross organizational collaboration, with possibilities to dynamically change the organization and creation of a new corporate culture as well as a new image based on openness to the surroundings and the public. Before the move great efforts were made to prepare DR's organization to the new conditions – for instance by user involvement – and it is important to continue this development of the organization to realize the potential, which DR Byen represents. The investigation indicates that the effect on staff motivation from the user involvement is no longer working but it made an easier transition into the new buildings.

Many expressions from the interview survey support this, for instance:

- *"It has been underestimated how long time change processes take"*
- *"The common areas are mostly used by those who are placed near them"*
- *"The understanding of how to use the common facilities is not developed yet"*
- *"It takes some time before you increase your radius"*
- *"When we moved in the motivation and energy was high. When people discovered that they could not work the way that they had expected (due to problems with the technology) the motivation went down"*

It is recommended that DR consciously continues to disseminate the ideas behind DR Byen and create events, activities and learning processes in the organization to make the staff informed about and experience the opportunities in the buildings, including possibilities to meet across the organization and use the common areas. The managers in DR have a crucial position in this respect, and it is important that all managers have the necessary knowledge, commitment and ability to take the lead in the process.

The thinking behind this recommendation can also be expressed in the following slogan:

Buildings are passive assets if they are not used actively - it is a management task to start activities that activate the assets

6.2 Recommendation about further evaluations

This interview survey is a preliminary qualitative evaluation of DR Byen carried out at an early stage when the building project were not completely finished, and the staff has only worked fairly short time in the buildings. Therefore, it is recommended to follow-up with further evaluation of both quantitative and qualitative nature.

The crisis in DR during the survey period of this evaluation makes it even more interesting to see how the results are in a follow-up evaluation at a later stage, when DR's economy and organization is less turbulent and the buildings are in a more finished condition.

More specifically it is recommended that DR carries out a questionnaire survey among all staff to provide a complete quantitative evaluation of the staff's experience and satisfaction with DR Byen. Such a survey could be part of a general survey on staff satisfaction in DR's organization, where the normal questions are supplemented by a number of questions related to DR Byen.

Furthermore, it is suggested to make a more in depth qualitative study implementing a method based on walk-through, which has been developed in the international research project "Usability of workplaces" and tested in case studies of buildings, for instance in Norway and Finland. In this method the researchers take a tour around the buildings, together with a group of users, and based on the concrete physical aspects they meet on their way, comments and evaluations from the users are collected in relation to a number of focus points, which are discussed at a workshop after the tour. Based on this the researchers can make an overall evaluation of the buildings in relation to the selected focus points.

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Annex 1. Interviewees

Name	Department	Seg.	Involv.	Dato
<i>Ledere:</i>				
John Norlin	ND-Ledelse	2	Ja	19-03-2007
Peter Zinckernagel	PD Pgr. Dir.	1	Ja	21-03-2007
Gitte Brandt	PD Pgr. Dir.	1	Ja	21-03-2007
Marianne Petersen	DR Økonomiecenter	3	Ja	22-03-2007
Torben Smidt Hansen	DR Kultur	1	Ja	22-03-2007
Thomas Hammer-Jakobsen	DR Nye medier og TV	1	Ja	28-03-2007
Peter Kyhl	DS	1	Ja	11-04-2007
Bettina Jensen	DR S&S Ledelse	3	Ja	16-04-2007
Steen Rabing	ND	2	Ja	03-05-2007
<i>Medarbejdere:</i>				
Henning Christian Larsen	DR Undervisning	1	Ja	28-03-2007
Stig Paulsen	Organisationer	2	Ja	30-03-2007
Jon Adelsten	DR Musik	1	Nej	10-04-2007
Lisbet Barrett	DR Dokumentar	1	Ja	26-04-2007
Thomas Grønvaldt	DR Akt. og viden	1	Ja	03-05-2007
Morten Hønnerup	Intern Service	3	Nej	07-05-2007
Asjörn Date	ND	2	Nej	14-05-2007
Søren Kristensen	ND	2	Ja	16-05-2007
Matias Stuve	TES Teknologi arkitektur	3	Ja	16-05-2007

Annex 2. Interview guide

1. Evaluation of the new surroundings

1. How does the overall layout of the building complex work
2. Which experience qualities do the architecture give to those working in the building?
3. How do the workplaces and furniture function?
4. How have the open environments influenced the collaboration and knowledge sharing?
5. How do the cafés and the informal meeting areas function?
6. How do the physical layout function concerning the proximity between the various functions?
7. Is there significant more transverse contact between the various functions internally in the department – if so what has been importance been?
8. Are there significant changes in the informal and formal contact internally among the staff – if so which changes?
9. Are there significant changes in the situation of the managers in relation to the staff – if so which changes?
10. How have these changes in technology influences the organisational efficiency?
11. How do you experience the indoor climate – light, air and sound/acoustics – and the building management of it?
12. How do the shared spaces in use in DR Byen at the moment function – staff restaurant, atriums, court yard, library, shared meeting facilities, reception etc.?
13. Is there significant more transverse contact between the staff across department – if so what has been importance been?
14. How do you experience the internal distances in DR Byen compared to TV Byen/Radio House?
15. Are the physical frames used as anticipated and expected or have you experienced surprises in terms of unexpected limitations or possibilities?
16. Have any internal moves and rearrangements taken place after occupation – if so, how has it functioned?
17. How do you evaluate the total effect of the new physical frames on the way the organisation functions in relation to creativity, innovation and productivity?
18. Which aspects has had the biggest positive and negative importance for the way the organisation functions after occupation?
19. Is there any change in the amount of work at home – personally and in general – if so which change
20. Have you noticed any changes in the corporate culture in DR after relocation to DR Byen – if so which changes?
21. Are there any important wishes that have not been fulfilled in the final result?
22. Have cuts been made in the building projects of significant importance to the use quality – if so which cuts?
23. What do you see as the best and the worst with the new physical frames?
24. Is there anything that should have been done different in the design and layout of the building – if so what?

25. Is there something in TV Byenand/or Radio House that you miss in DR Byen – if so what?
26. How does the smoking policy work?

2. User involvement

1. What do you think about the group oriented approach of involving users?
2. What do you think about the size of the working groups ($\pm 6-10$ p)
3. How do you think the user input has been used?
4. How would you grade the process of user involvement?
5. If conflicts between different parties with different requirements arose, how have they been resolved?
6. What was the influence of the management during the whole process?
7. How has the personal input of people contributed to the result?
8. How do you think working in a team has contributed to the result?
9. How has the effort/energy that has been put in the process been rewarded? Sufficient?
10. How would you evaluate the information exchange between architects, end-users and management?
11. How has the staff been (mentally) prepared before moving in?
12. Which qualifications/competences should someone have to be involved in the design process?
13. Which qualification/competences should someone have to manage a work-group?
14. Were there any problems due to variety of people involved in the groups?
15. What is in your opinion the most important result of the user-involvement process?
16. What would have been the result if the end-users were not involved?
17. Do you believe that involving the end users has contributed to a building that better fits the needs of the users?
18. How do you think involving the end-users has influenced staff motivation?
19. Which elements/factors have had the biggest influence? (goal setting, intrinsic motivation, extrinsic motivation, work environment)
20. What are the differences people between that have been involved, and those who have not?
21. In general, how satisfied are people with the new DR Byen?
22. Which groups are particularly satisfied or dissatisfied?

3. Evaluation of the overall process

Of the following questions 2-7 was mostly asked to managers and the union representative

1. How did you experience the coherence between the planning of the building process and the development in technology, work processes and organisation?
2. To which degree have there during the planning process been changes in technology, work processes and organisation?
3. Were these changes anticipated in the briefing process or have they created problems in relation to the planned design and interior layout of the building - if so which problems?

4. How do you evaluate the process and the result of the briefing?
5. How do you evaluate the process and the result of the interior design?
6. How do you evaluate the architect's and the building client organisation's responsiveness to the needs over the users?
7. Has the change of Director General for DR midway had impacts on the further process – if so which impact?
8. Is there something that should have been done differently during the process – if so what?

4. Fulfillment of the vision for DR Byen

1. Is a world class media centre being created by DR Byen?
2. Are flexible and open work environments for the staff being established
3. Has an inspirational base for collaboration and creativity for the staff been established?
4. Will DR Byen provide to better programs for the Danes?
5. Will DR Byen provide more programs to choose between for the Danes?